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## THE ROLE OF EVIDENCE IN THE ECONOMIC ANALYSIS OF PUBLIC POLICY IN PROVINCES



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## ABSTRACT

The vision of a prosperous South Africa as captured in the Constitution (1996) is an ideal to which all public policies must aspire, including those of provincial governments. Public policies in provinces are key instruments for achieving this vision, especially as provinces have varying levels of development. Therefore, provincial governments are essential vehicles of development.

However, policy makers in provinces are faced with an increasingly complex world which requires strong public policy analysis capacity. Since the 1960s, governments around the world have developed public policy analysis systems, and South Africa is no different. The Government-Wide Monitoring and Evaluation System is intended to support policy analysis in all spheres of government, including setting out what constitutes evidence for public policy analysis.

As policy analysis is a multidisciplinary process of inquiry by nature (Dunn, 2015:2), it places a significant burden on the adequacy and relevance of the Government-Wide Monitoring and Evaluation System evidence requirements. This is particularly relevant for the economic analysis of public policy in provinces which is often limited by the lack of data and relies on estimated statistics which originate from a variety of sources, which may be outside the Government-Wide Monitoring and Evaluation System (such as those in the private sector). Furthermore, contradictory estimates of a statistic raise questions about the credibility of this economic analysis

This study, therefore, investigated the role of evidence in the role which evidence plays in the economic analysis of public policy in provinces. This was aimed at assessing the nature of economic analysis in provinces in the context of the Government-Wide Monitoring and Evaluation System, and the challenges thereof.

This study found that there were gaps in the Government-Wide Monitoring and Evaluation System in terms of supporting the economic analysis of public policy in provinces in terms of evidence. The main challenges were centred on the shortages of official data and the validity of provincial data. It was recommended that a wider

perspective on the economic analysis of public policy in provinces be adopted. A wider perspective essentially means that economic analysis in provinces is viewed as part of the wider public policy analysis from which it can learn and grow. This wider perspective can be based on the implementation of the “more principle”, a flexible management approach, and a deeper understanding of the role of the economic analyst.

# TABLE OF CONTENTS

# LIST OF FIGURES

# LIST OF TABLES

# LIST OF ABBREVIATIONS

**ANOVA:** Analysis of Variance

**CGE:** Computable General Equilibrium

**GWM&ES:** Government-Wide Monitoring and Evaluation System

**NDP:** National Development Plan

**NGP:** New Growth Path

**TMR:** Transformation, Modernisation and Reindustrialise

# 1. INTRODUCTION

The vision of a prosperous South Africa as captured in the Constitution (1996) is an ideal to which all public policies must aspire, including those of provincial governments. Public policies in provincial government are especially important in addressing the varying levels of development in provinces.

For example, Statistics South Africa (2017:32) states that poverty rates vary significantly amongst provinces, indicating that some provincial governments face more difficult socio-economic challenges than others.

However, policymakers in provinces are faced with a rapidly changing world where policy alternatives can be numerous and can provide multiple consequences which can be difficult to anticipate (Walker, 2000:11). However, this complexity does not limit the responsibility of policymakers to enhance social welfare.

Since the 1960s governments have developed public policy analysis capacity to enable an increasingly informed approach to public policymaking (Theletsane, 2016:184). In line with other countries, in 2005 South Africa introduced an evidence-based policy analysis system, which is based on the popular evidence-based paradigm (Cloete, 2009:294). The Government-Wide Monitoring and Evaluation System (GWM&ES) intended to support policymaking across all spheres of government. The GWM&ES sets out clear requirements for what constitutes evidence in public policy analysis.

As policy analysis is a multidisciplinary process of inquiry by nature (Dunn, 2015:2), it places a significant burden on the adequacy and relevance of the GWM&ES evidence requirements. This is particularly relevant for the economic analysis of public policy in provinces which is often limited by the lack of data and relies on estimated statistics which originate from a variety of sources, which may be outside the GWM&ES (such as those in the private sector). Furthermore, contradictory estimates of a statistic raise questions about the credibility of this economic analysis.

Given this context, it is therefore important to understand the role of evidence with particular reference to economic analysis of public policy in provinces. The aim of this study is to understand the linkages between policymaking and policy analysis. Also, to contextualise the economic analysis of public policy in provinces within the GWM&ES by highlighting its importance to the economic analysis in provinces. Finally, through an assessment of economic analysis in provinces, the study highlights the evidence challenges in the economic analysis of public policy within provinces and concludes with a discussion on potential solutions to improve these challenges.

## 2. PUBLIC POLICY AND PUBLIC POLICY ANALYSIS

There are various approaches to defining public policy analysis. However, in order to obtain a clear meaning of public policy analysis, firstly we have to differentiate between public policy and policy analysis. Dye (1984:1) described public policy as what the government chooses what to do or not to do. In addition, Jenkins (1978:14) defined public policy as a set of interrelated decision taken by political actors concerning the selection of goals and means of achieving them. Whilst Henekom (1987:7) argued that policy is an indication of a goal or programme of action that has been agreed upon hence public policy is the articulated goal implemented by a legislator with an aim of addressing societal needs.

Public policy analysis, therefore, is a rational systematic approach of making policy choices in the public sector (Walker, 2000:1). The main purpose of policy analysis is to support policymakers on making various choices of action in complex conditions. Dunn (2015:15) emphasised that policy analysis varies depending on the institutional setting. In a government setting, policy analysis is subjected to time constraints, and other institutional factors such as the quality of public policy analysts and available resources.

Bell, Raiffa and Tversky (2011:9-18), outlined three major models of policy analysis which are descriptive, normative and prescriptive policy approach. The descriptive model is more concentrated to the way they do things and to some extent requires mathematical modelling and statistical analysis. The normative model is highly

concentrated on the idealistic and rational perception on how people should act or think.

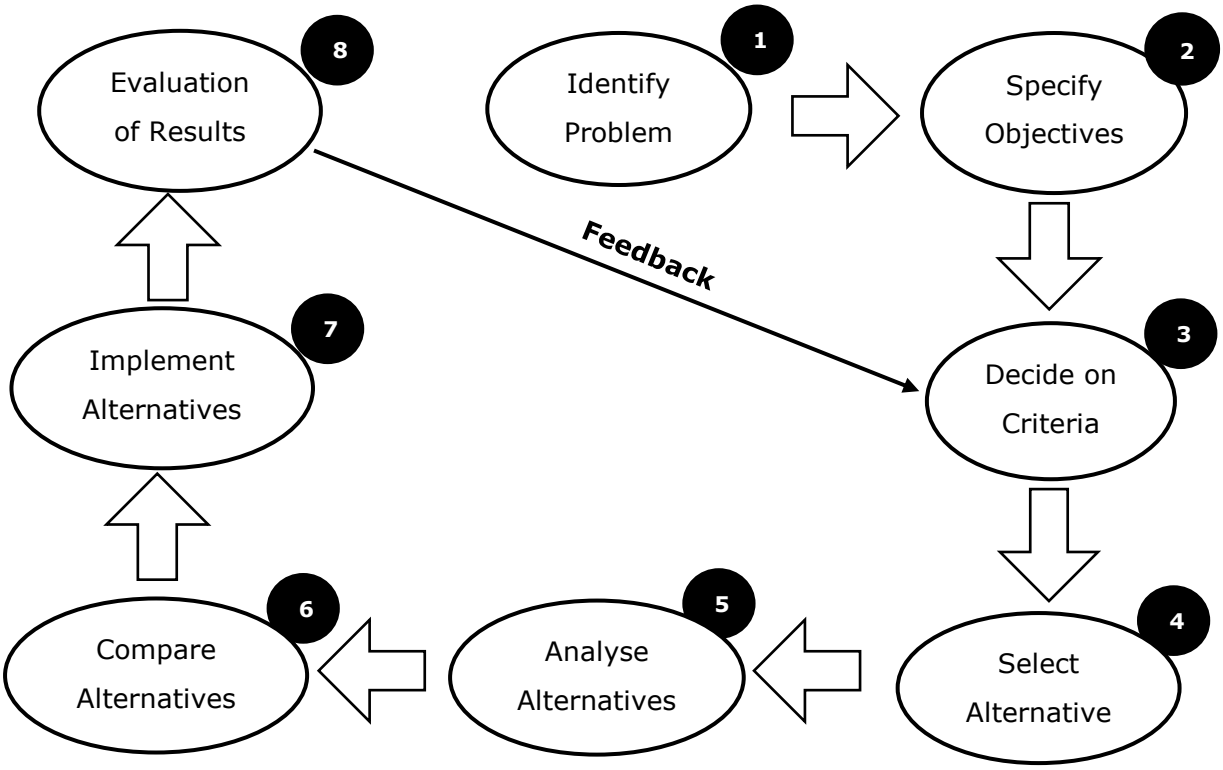
Prescriptive model focuses on a set of logical propositions which include some of the logical theories and empirical findings. It concentrates on how policymakers should act under certain circumstances. For examples prescriptive statement are more subjective or aesthetic in nature and mostly quoted in an ethical manner.

According to Bell et al. (2011:17-18), these models can be distinguished by examining the criteria in which they are evaluated. Descriptive models can be evaluated by their empirical validity and normative models are evaluated by their theoretical adequacy whereas the prescriptive models are evaluated by their ability to help policy makers to make better decisions. Furthermore, policy analysts are not limited in terms of methodological approach when practicing policy analysis. They can either adopt the quantitative approach which includes case studies and survey or qualitative approach which requires statistical analysis or survey (Dunn, 2015:3).

Walker (2000:13-14) identified the eight traditional stages of policy analysis process that policy analyst can adhere to when analysing polices. The sequence of this process is shown in Figure 1 below.

The first step of policy analysis is identifying the problem; this phase involves detecting problems within the society. The second step includes setting of objectives based on the problem identified. In the third step, analysts are required to evaluate various alternative policies and cost benefit analysis of the desired policy. Step 4 involves selecting alternatives.

**Figure 1: Generic public policy analysis process**




Source: Walker, 2000

The next step involves analysing each alternative to identify the impact if the alternative policy is chosen. In step six policy analysts will compare the alternatives in terms of costs and other effects. The policy is then implemented. The last step involves monitoring of results to ensure that the policy meets the objectives as anticipated.

## 3. CONTEXTUALISING ECONOMIC ANALYSIS IN PUBLIC POLICY ANALYSIS

Economics as a discipline attempts to address the problem of scarcity in the society. That is, in the context of scarcity it is vital that resources are allocated efficiently to address fairly all the needs and wants of the society (Smith, 1999:2). Therefore, the economics professional plays a necessary role in translating economic problems into policy decisions (Bonnen and Schweikhardt, 1997:584). This can be done through economic analysis of public policies.

Economic analysis broadly attempts to scientifically determine how the scarce goods and services are allocated with the existing scarce resources (Mcafee, Lewis, and

Dale, 2005:7). In particular addressing public policy challenges is difficult due to multidimensional nature of the problems that these policies attempt to solve.

Economic analysis is in essence an element of public policy analysis and its systematic approach to the making of public policy choices (Manning, Shane, Nick, Gabriel, and Margarita 2016:5). As such there are various valuation techniques such as cost-benefit analysis which evaluate the impact of policies on the economy and society (Manning et al., 2016:6). For an example, a model in a crime study can use economic theories of rational behaviour and human capital, by using supply and demand as tools to illustrate how interventions will produce social benefit.

## 4. EVIDENCE-BASED PARADIGM IN SOUTH AFRICA

It is only in the last four decades that computer technology had advanced to the point that sufficiently large databases could be compiled to feasibly allow for the analysis of many, large data series and to seek any possible interrelations between these series. One of the effects of this computing revolution was that governments could, for the first time, analyse the impact that their policies had on their countries using statistical evidence, rather than relying on the opinions of individuals or limited groups (Cloete, 2009:294).

This evidence-based approach to policy analysis can, if properly applied, improve the quality of a government's policy interventions when addressing its country's challenges (Cloete, 2009:294). In South Africa this is the GWM&ES.

The GWM&ES is government's larger monitoring and evaluation system which is spear headed by the Presidency, National Treasury and the Department of Public Service and Administration (Cloete, 2009:299). It is directly relevant to monitoring progress towards the organisation's objectives, such as a government assessing labour market data to determine its success or lack thereof in combating unemployment. This information can then be used in the evaluation of the effectiveness of a policy that was intended to support the achievement of that objective, by comparing the data before and after implementation of the policy

Specific criteria must be put in place to determine the success or failure of a policy. Has it achieved its goals? Did it do so in a cost-effective manner? Evaluating cost-effectiveness is the responsibility of national and provincial treasury departments, which also use statistical data to produce economic analysis that can be used to estimate the effectiveness of policies that were intended to stimulate the economy. The National Treasury takes the lead in these matters, often setting the requirements and standards wherever they are not already set by legislation (National Treasury, 2010:14).

Evidence, in this context, is data which has been collected scientifically and systematically and which is suitable for the application of statistical techniques. This allows it to be tested for biases or other flaws and, if it is found to be of sufficient quality, it can then be analysed to determine trends, interrelationships with other data sets and any other relevant qualities.

Within government, evidence include, for example, the transaction data that government departments and agencies record, payroll data, health records, crime statistics and data from Statistics South Africa.

Statistics South Africa is the primary data provider in South Africa. Statistics South Africa, through its National Statistics System and the South African Statistics Quality Framework, is in the process of defining and improving the quality of official government data (National Treasury, 2010:2). Government departments, are required to comply with the standards set by the GWM&ES.

## 5. PROVINCIAL DIMENSIONS OF POLICYMAKING

The economic analysis of public policy in provinces can be difficult due to the complex nature of policy making in South Africa. The Constitution (1996) established a system of government based on the principles of cooperative intergovernmental relations for the benefit of citizens in South Africa. To this end three spheres of government (national, provincial, and local) were established.

These spheres are distinctive, interrelated, and interdependent (Malan, 2015:2). This means that each sphere of government has its own functions that are prescribed by the Constitution, but on certain areas national government (and provincial government) monitors, intervenes, and supports the other spheres. Furthermore, the three spheres share resources and have various coordinating structures.

To this end provincial governments make policies concurrently with national and the local spheres based on these principles of corporative intergovernmental relations. Therefore, national policies are binding on all three spheres of government, and provincial and local policies must not be in contradiction to national policies.

For example, the Gauteng Provincial Government crafted a developmental policy to transform, modernise and reindustrialise (TMR) Gauteng in a manner that it creates decent employment through inclusive economic growth. This policy is essentially an expression of the broader National Development Plan (2012). All other provinces have similar programmes. At the same time national departments such as the Department of Economic Development have policies such as the New Growth Path (2010) which have a strong provincial focus.

Despite this, provincial governments retain the responsibilities to ensure that the implemented policies are based on a rationally defensible base in order to ensure that formulated policies address the socio-economic problems facing the provinces. That is, in line with the Constitution, provincial governments are competent to take and implement policy decisions. Therefore, it is important that accurate information (or more broadly evidenced as described in the GWM&ES) is essential for policymaking (Chelele, 2010:66).

# 6 ECONOMIC ANALYSIS OF PUBLIC POLICY IN PROVINCES

Economic analysis of public policy in provinces is mainly cantered in the two key economic departments, that is, the provincial treasuries and the provincial departments of economic development. Both departments produce similar analysis

with a different purpose or mandate of the department (fiscal policy and development policy). Table 1 below outlines the key focus of economic analysis within provinces and the various sources of evidence which underpin this analysis. This is with specific reference to provincial treasuries.

On an annual basis, all the provinces either produce a provincial economic review and outlook, or a socio-economic review and outlook document, or both. This analysis is aimed at highlighting key economic trends within the provinces. In provincial treasuries particularly, the timing of this analysis is aligned with that of the provincial budget cycle. In other words, these documents provide economic input to the provincial budget process.

Some provinces also produce quarterly or semi-annual report, like quarterly economic updates and/or economic bulletins, in order to inform the stakeholders and officials about the topical economic developments on a more frequent basis. These are in essence, similar to the annual economic analysis.

Although all the provinces use data provided by Statistics South Africa and other provincial departments, which are regarded as the official data providers in terms of the GWM&ES, where the data is lagging or non-existent, provinces use private data providers. Most provinces are subscribed to the IHS Markit and Quantec Research data service providers. Gauteng and Western Cape are also subscribed to services such as Bloomberg. In this way, private data providers offer a significant input into the economic analysis of public policy in provinces.

Lacking in most provinces is the economic impact analysis of public policy. Gauteng, however, using consultants, is currently building a Computable General Equilibrium model, which will be used to measure the economic impact of public policy in the province.

## Table 1: Economic analysis in provinces

| Provinces | Annual Economic Research Reports | | Quarterly/Semi-annual Economic Research Reports | Private Data Providers | | | | | Official Data Providers | | Economic Models |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Provincial Economic Review and Outlook | Socio-economic Review and Outlook | | IHS Markit | Quantec | Bloomberg | Reuters | Beaurea of Economic Research | Statistics South Africa | Other Entities | |
| Eastern Cape | | x | x | x | x | | | x | x | x | CGE Model (Incomplete) |
| Free State | | x | | | | | | | x | x | |
| Gauteng* | | x | x | x | x | x | | | x | x | |
| Kwa-Zulu Natal | x | x | x | x | | | | | x | x | |
| Limpopo | | x | x | x | | | | | x | x | |
| Mpumalanga | x | x | | x | x | | | | x | x | |
| North West* | | x | | x | | | | | x | x | |
| Northern Cape | x | | x | | | | | | x | x | |
| Western Cape | x | | | x | x | x | x | x | x | x | |

Source: Own Analysis, 2015/16 Provincial Annual Reports, 2016

Note:*2016/17 Annual Report. Data `providers sourced from outputs such as the various provincial economic review and outlook publications and socio-economic review and outlook published by the provinces. The above table was compiled by collecting the 2015/16 and 2016/17 annual reports from all the nine provincial treasuries in South Africa. Provinces produce different documents about the economic performance and outlook and socio-economic development indicators of the provinces. Other entities include provincial departments, South African Reserve Bank, South African Revenue Service, International Monetary Fund etc.

# 7. EVIDENCE CHALLENGES IN ECONOMIC ANALYSIS

## 7.1 Shortages in official data

Data availability at a sub-national level remains a challenge in South Africa. This is as Statistics South Africa does not provide much data for the provincial level. The reasons for this are unclear, but resource constraints may be the most likely.

There are also data sets in which some provincial data is available from Statistics South Africa, but only on the annual scale rather than the quarterly or monthly (see Table 1 below). An even greater amount of data is not available such as provincial trade data.

**Table 2: Data availability of selected variables**

| | Gross Domestic Product | Labour | Consumer Price Index | Trade | Poverty |
|---|---|---|---|---|---|
| **National** | Quarterly | Quarterly | Monthly | Monthly | Intermittent |
| **Provincial** | Annual | Quarterly | Monthly | Unavailable | Census |

Sources: Statistics South Africa and South African Revenue Services, 2018

For example, Statistics South Africa publishes Gross Domestic Product data on a quarterly basis. However, they only provide provincial data annually in the fourth quarter release and this data is only on a year on yea bases. Gross Domestic Product data at the district level or below, is not available through the Statistics South Africa website.

This lack of data from on a sub-national level necessitates the existence of private sector data providers. These providers estimate regional estimates based on national data from Statistics South Africa.

Although the lack of data serious problem in its own right, a more pressing problem eminent from the use of private data providers themselves. That is, a case could be made that economic analysis in provinces is effectively outsourced to private data

providers who in effect inform policymaking in provinces through their data. Especially since these private data providers fall outside the GWM&ES. This creates a trust deficit in the economic analysis of public policy within provinces, particularly amongst those who may be more politically inclined to dismiss such analysis.

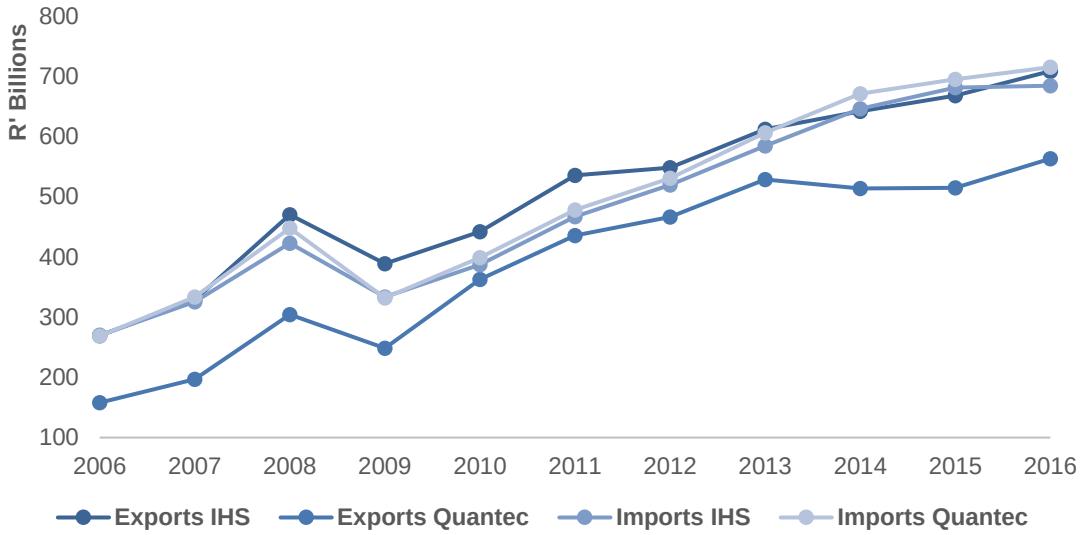
## 7.2 Differences in estimates

Differences in estimates are common between different data providing entities. This is expected, as their methodologies for data collection and estimation are not identical. To a large extent, economic data are estimated, as the full population of most economic activities are too complex to feasibly count. Not even the exhaustive and expensive national censuses count the entire populations.

In provinces this is especially relevant as official statistics often lag or are simply unavailable. The heavy reliance on private data providers results in exposure to different estimates emanating from different estimation methodologies. These differences can be as simple as the sample period which was used in the estimation, to entirely different statistical or econometric procedures.

For example, Figure 2 shows Gauteng export and import data for the period from 2006 to 2016, from both IHS Markit and Quantec Research. This data is largely unavailable at the provincial level from official sources and these companies specialise in using the data that is available from official providers, together with surveys of local businesses and households, to generate mathematical models that estimate values that are highly likely to be very close to the correct value. IHS Markit estimated Gauteng's exports and imports for 2016 at R708.3 billion and R684.2 billion, respectively. Quantec Research's estimates for 2016 were R563 billion for exports and R714.9 billion for imports. These trade estimates, despite being from different companies, move very similarly to one another. However, these estimates are in essence different.

**Figure 2: Comparison of Gauteng trade data**

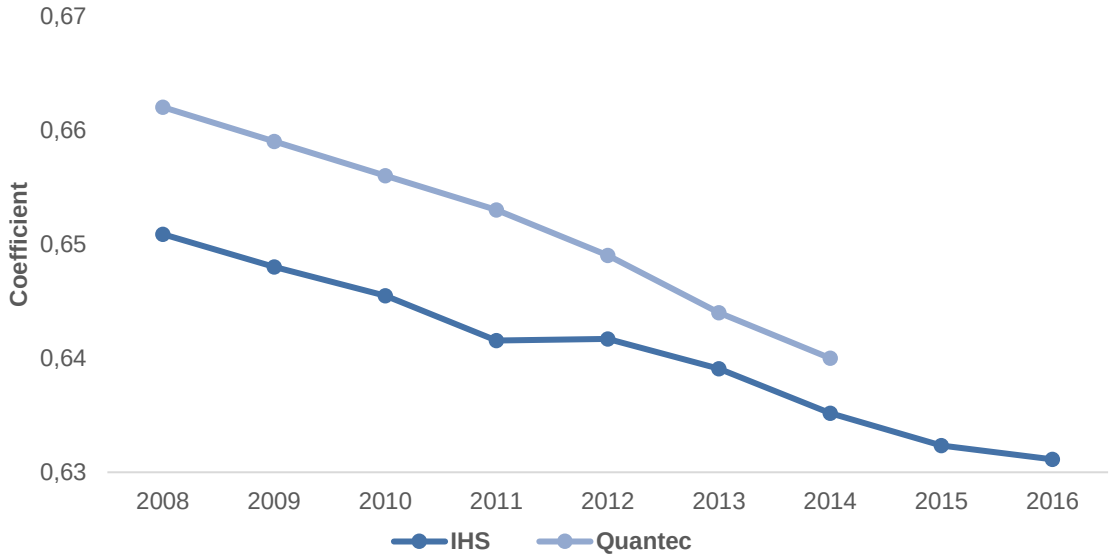



Sources: IHS Markit and Quantec Research, 2018

The Gini coefficient is another example, and is a measure of income inequality as shown in Figure 3. Income data are not exact, particularly at any level below national. The Gini coefficient must, therefore, be calculated using estimated numbers.

Again, these estimates are generated using the best available data and the resultant coefficient is moving down in the releases from both data providers, indicating that the situation is improving, though the extent of inequality is not precisely known. The Gini coefficient ranges from a minimum of 0 for equality to a maximum of one for inequality. The IHS Markit estimate for 2008 was 0.65, while the estimate from Quantec Research was 0.66. Both estimates for 2014 round off to 0.64.

**Figure 3: Gauteng Gini-Coefficient comparison**




Sources: IHS Markit and Quantec Research, 2018

Note: Data for 2015 and 2016 was not available from Quantec Research

Another example is that of formal employment by economic sector (see Table 2). Both data providers have the finance and business services as the largest employer in Gauteng, accounting for 27.9 per cent of total provincial formal employment in 2016 in the estimates from IHS Markit and 30.4 per cent from Quantec. Both have electricity, gas and water as the smallest employer, at 0.6 per cent in both sets of estimates.

**Table 3: 2016 Gauteng Formal Employment by Economic Sector**

| | IHS | Quantec |
|---|---|---|
| **Agriculture, forestry and fishing** | 1.0% | 1.9% |
| **Mining and quarrying** | 2.2% | 1.8% |
| **Manufacturing** | 14.2% | 13.3% |
| **Electricity, gas and water** | 0.6% | 0.6% |
| **Construction** | 6.3% | 6.4% |
| **Wholesale and retail trade** | 18.7% | 22.4% |
| **Transport and communication** | 6.8% | 5.9% |
| **Finance and business services** | 27.9% | 30.4% |
| **Government, social and personal services** | 22.2% | 17.3% |

Sources: IHS Markit and Quantec Research, 2018

Although the differences in estimates can be marginal, these have the potential to cause confusion especially to policy makers. Furthermore, to economic analysts that are not properly trained, these differences can be a source of spurious conclusions

and arguments. These effectively can create a credibility challenge for the proper use of such analysis in provinces.

# 8. RESOLVING EVIDENCE CHALLENGES

## 8.1 The “more principle”

Perhaps counter-intuitively, the use of multiple data providers, including those outside of the GWM&ES, is beneficial. This is due to the fact that no estimate is perfect. In statistics, error can be minimised but not eliminated. The use of multiple sources for estimates allows for comparison to further minimise error. It would, in fact, be better still if even more data providers could be used. However, there are only so many providers and of those, not all provide data on a provincial level.

In this study this approach is referred to as the “more principle”. Underlying this principle is what is generally know and understood as the law of large numbers, that is, with more observations over time it becomes likely to converge to the true figure. For example, in a situation where we have two data providers and they estimated that the level of inequality in Gauteng is 0.6 and 0.58 respectively. Data providers should be in a position to outline all the methodological challenges and setbacks arriving to their final estimated figure to enable researchers to choose which method to follow. This process of comparison can, therefore, improve the estimated data.

Regardless, private data providers often use data from Statistics South Africa as a base and supplement it with survey data that they collect themselves or other parties. For example, data providers take surveys and use the results to estimate percentage shares between the local municipalities of a province and then apply those percentages to the provincial or national data provided by Statistics South Africa, so that they can estimate the figures for that economic indicator in each of those municipalities.

In the absence of actual data, estimation is the best option, and more estimates allows for a more robust indication of the closeness of these estimates to the actual data.

Therefore, the “more principle” is congruent with the evidence-based paradigm, but not necessarily the GWM&ES. However, this can be mitigated by a higher level of transparency from private data providers.

## 8.2 Reconciling differences in estimates

There are various methods that researchers can adopt to determine statistical differences in two data samples. That is, there a key difference between differences in data and a statistical difference in data. For example, two data points can be different but not statistically different.

This is essential in instances were estimates seem different or contradictory, but this difference may not be statistically significant. Therefore, this difference may not have a material bearing on the public policy choices, which emanate from the economic analysis of public policy.

A common method is the Analysis of Variance (ANOVA) approach which is a statistical hypothesis method used to test for statistical differences between two or data samples (Heron, 2009:2-17).

For example, given two different Gross Domestic Product estimates obtained from two data providers which differ from each other, ANOVA can be used to estimate whether this difference is statistically significant. If the ANOVA proves that two data sets are statistically not different, then such data sets become more reliable for analysis.

## 8.3 Management approach

Management can also strategically contribute to resolving evidence challenges in their specific areas of responsibility. In most cases the outcomes of economic analysis and traditional project management may not be adequate.

A flexible approach to managing these types of projects may be required, based on an understanding of policy analysis or more specifically economic analysis. For example, management can strategically outline how it plans to mitigate the challenges,

including completion delays, related to lack of official data in order to achieve their objectives, including the financing of such data.

A key aspect to this flexible approach is a flexible human resource development paradigm towards economic analysts. The evidence-based paradigm places significant pressure on economic analysts as demands for more 'answers' from policymakers grow. Therefore, the ability to adapt must be underpinned by an approach to human resource development which encourages continuous learning and a degree of autonomy for economic analysts.

## 8.4 Role of the economic analyst

The most crucial characteristic of an economic analyst is to have technical background in economics, good analytical skills, interpersonal skills, communication skills, and computer skills (Mafunisa, 2014:1109). The economics technical background is built through academics and a minimum education requirement for an economic analysts is a bachelor's degree in economics (Pomorina, 2012:7). Furthermore, by acquiring this degree an economic analysis can have knowledge in economic history and real-life case studies of micro and macroeconomic policies. Allowing the economic analyst to grasp the application of economic ideas.

Therefore, the economic analysts should be equipped with logical and problem-solving skills based on sub-disciplines such as econometrics, mathematics, and statistics. Quantitative skills are essential as most of economic analysis requires them. For instance, economists use statistical and mathematical models to simulate the public policy problems which there are trying to solve.

Communication skills and interpersonal skills go hand in hand for the economic analyst. These skills are required to be able to convey the work done by researchers to the policymakers (Pomorina, 2012:7), allowing an effective response to the policy problems. Both oral and written communication are required to present data and research outcomes. Most importantly, in the complex policy environment, it is crucial to communicate a wide context of problems and solutions. Interpersonal skills, also

enable the economic analysts to communicate better and it contributes to the organisation's success.

Computer skills are also an important skill set of an economic analyst. Computers are used for multiple functions to enable an optimal competency of the work done by economic analysts. Computers are also used to source and store information and data.

The ability to interrogate the evidence (information and data) that is available also relies on computer skills, models are built using computers. Also, other computer functions like a simple excel are used to calculate and prepare data for use in other complex software applications such as Eviews. Computer skills also allow for effective communication through reports and presentations.

Finally, but not least important, economic analysts must adhere to ethical conduct as this allows for the economic analysis of public policy to be conducted to the benefit of society (Dench, Iphonen, and Huws, 2004:1). There are number of ethical guidelines which an economic analyst needs to apply, including the adherence to data protection and intellectual property rights.

As a final point, Tirelo (2018:76) promotes the use of an ethical charter for economic analysts by stating that "an ethical charter also helps remind researcher of the basic principles concerning the transparency of their data and the methodology they should follow, along with the duty to divulge potential conflicts of interest". This is well in line with section 195 of the Constitution which outlines the values and principles of the public administration, and in particular the value of promoting and maintaining a high standard of professional ethics.

## 9. CONCLUSION

This study focused on outlining key evidence challenges in the economic analysis of public policy in provinces, and how these challenges can be mitigated. This study deliberately located economic analysis within public policy analysis to differentiate from the broader field of economic analysis. That is, economic analysis as a form of public policy analysis is specifically focused on understanding and quantifying the economic impact of public policies.

This also means that the economic analysis of public policy in provinces is part of the broader evidence-based policy analysis system in the country (GWM&ES), and subject to its requirements. It was argued that as a result of shortages in official data on provinces, the GWM&ES may be inadequate as it does not include private data providers on which provinces rely significantly for provincial data. Furthermore, it was argued that differences in data estimates from various data providers, place a significant responsibility on data providers to be transparent because of different methodologies of data collection and estimation used. The transparency will ensure that the public interest is promoted.

It is recommended that a wider perspective on the economic analysis of public policy in provinces be adopted. A wider perspective essentially means that economic analysis in provinces is viewed as part of the wider public policy analysis from which it can learn and grow, instead of a narrow pursuit of (for example) proving or disproving economic theories.

Finally, this wider perspective can be based on the application of the “more principle”, a flexible management approach to the economic analysis of public policy in provinces, and well trained economic analysts who act in the public interest and promote professional ethical conduct.

## REFERENCES


Bell, E., Raiffa, H., and Tversky, A. (2011). Decision Making Descriptive, Normative and Prescriptive Interactions. Cambridge: Cambridge University press.

Bonnen, J.T and Schweikhardt, DB. (1997). Getting from Economic Analysis to Policy Advice. Michigan: Oxford Press.

Chelechele, T. (2010). A critical analysis of the Implementation of the Social Assistance Grant Policies in the North West Province of South Africa. University of Pretoria.

Cloete, F. (2009). Evidence-based policy analysis in South Africa: Critical assessment of the emerging government-wide monitoring and evaluation system. Journal of Public Administration.

Dench, S., Iphofen, R., and Huws, U. (2004). An EU Code of Ethics for Socio-Economic Research. United Kingdom: Respect Project

Dunn, W.N. (2015). Public Policy Analysis (Fifth Edition). New Jersey: Pearson Education.

Dye, T.R. (1984). Understanding Public Policy. Englewood: Prentice-Hall.

Hanekom, S.X. (1987). Public policy: Framework and instrument for action Halfway House: Southern House Publishers. Halfway House.

Heron, E. (2009). Analysis of variance. Accessed (March 2018) attainable at from www.tcd.ie/medicine

Jenkins, W.I. (1978). Policy Analysis: A Political and Organizational perspective. London.

Mafunisa, M. J. (2014). Addressing public finance management skills shortage in South African Public service. Journal of Public Adminstration.

Manning, M., Shane, D.J., Nick, T., Gabriel, T.W.W, Margarita V. (2016). Economic Analysis and Efficiency in Policing, Criminal Justice and Crime Reduction. New York: Palgrave Macmillan.

Malan, L. (2015). Intergovernmental Relations (Class Notes). University of Pretoria

Marume, S. B. M., Mutongi, C., Jubenkanda, R. R., and Chikasha, A. S. (2016). Public policy analysis models. International Journal of Humanities and Social Studies.

Mcafee, R.P., Lewis, T.R., Dale, D.J. (2005). Introduction to Economic Analysis. Creative Commons

National Treasury. (2010). Framework for Strategic Plans and Annual Performance Plans. Government Printers.

Pomorina, I. (2012). Economics Graduates' Skills and Employability. Bristol: Economics Network.

Smith, H.M. (1999). Understanding Economics. Abingdon: United Kingdom Routledge

Statistics South Africa. (2017). Poverty Trends in South Africa. Statistics South Africa. Pretoria: Government Printers.

South Africa, Republic. (1996). Constitution. Government Printers.

South Africa, Republic. (2012). National Development Plan. Government Printers.

South Africa, Republic. (2010). New Growth Path. Government Printers.

Tirelo, J. (2018). Economic for the Common Good. New Jersey: Princeton University Press.

Thelestane, K. (2016). Public policy analysis: a critical overview. Journal of Public Administration.

Walker, W. E. (2000). Policy analysis: a systematic approach to supporting policymaking in the public sector. Journal of Multi-criteria Decision Analysis.

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